1. A method, comprising:

applying a high pass filter to at least one chrominance component of a color image to compute at least one high pass filtered chrominance component, and

adjusting a luminance component of the color image based upon the at least one high pass filtered chrominance component.

2. The method of claim 1, further comprising generating an output image based upon the adjusted luminance component.

3. The method of claim 1, further comprising combining multiple high pass filtered chrominance components into a single chrominance component before adjusting the luminance component.

4. The method of claim 1, further comprising:

applying a high pass filter to a luminance component of the color image to compute a high pass filtered luminance component; and

weighting the at least one high pass filtered chrominance component by a weighting factor based upon the high pass filtered luminance component.

5. The method of claim 4, wherein the weighting factor includes a sign factor,

wherein the sign factor is minus one when a polarity of the high-pass filtered chrominance information is opposite that of the high-pass filtered luminance signal; and

wherein the sign factor is one when the polarity of the high-pass filtered chrominance information is the same as that of the high-pass filtered luminance signal.

6. The method of claim 4, wherein the weighting factor includes a high pass filtered luminance factor based upon the magnitude of the high pass filtered luminance component.

7. The method of claim 6, wherein the high pass filtered luminance factor is small or zero when the magnitude of the high pass filtered luminance component is large and wherein the HPFL factor is large when the magnitude of the high pass filtered luminance factor approaches zero.

8. The method of claim 1, further comprising converting information from the color image from an RGB representation to a luminance-chrominance representation.

9. The method of claim 1, further comprising weighting the at least one high-pass-filtered chrominance component by a weighting factor based upon a magnitude of the high pass filtered chrominance component.

10. A grayscale image generated by:

applying a high pass filter to the chrominance components of a color image; and

combining the high pass filtered chrominance components into the luminance component of the color image to create a modified luminance component.

11. A system for converting a color image to a grayscale image, comprising:

an image input device that receives a color image having luminance and chrominance components;

an edge detector operably connected to the image input device, the edge detector including a high pass filter for computing high-pass filtered chrominance components from the received chrominance components;

a feedback unit operably connected to the edge detector, wherein the feedback unit modifies the luminance component based upon the high-pass filtered chrominance components; and

an output device operably connected to the feedback unit, wherein the output device receives the modified luminance component and outputs a grayscale image based upon the modified luminance component.

12. The system of claim 11, wherein the edge detector combines multiple high-pass filtered chrominance components into a single high-pass filtered chrominance component.

13. The system of claim 12, further comprising a processing unit operably connected to and between the edge detector and the feedback unit;

wherein the edge detector is also used to compute a high pass filtered luminance component from the received luminance component; and

wherein the processing unit weights the high-pass-filtered combined chrominance component based upon the high pass filtered luminance component.

14. The system of claim 13, wherein the signal comparator modifies the high-pass-filtered chrominance component;

wherein the sign factor is minus one when a polarity of the high-pass filtered chrominance information is opposite that of the high-pass filtered luminance signal; and

wherein the sign factor is one when the polarity of the high-pass filtered chrominance information is the same as that of the high-pass filtered luminance signal.

15. The system of claim 13, wherein the processing unit weights the high-pass-filtered combined chrominance component based upon the magnitude of the high pass filtered luminance component.

16. The system of claim 15, wherein the processing unit weights the high-pass-filtered combined chrominance component such that the weighted high-pass-filtered combined chrominance component is small when the high pass filtered luminance component is large, and the weighted high-pass-filtered combined chrominance component is large when the magnitude of the high-pass-filtered luminance component approaches zero.

17. The method of claim 11, further comprising a color transformation device operably connected to and between the image input device and the edge detector, wherein the color transformation device converts the color image from an RGB representation to a luminance-chrominance representation.

18. The method of claim 11, wherein the output device is a printer.

19. The method of claim 11, wherein the output device is a display screen.

20. The method of claim 11, wherein the output device is electric paper.

21. The method of claim 11, wherein the output device is a facsimile machine.

22. A method, comprising:

applying a high pass filter to the luminance and chrominance components of a color image to compute high pass filtered luminance and chrominance components;

combining multiple high-pass filtered chrominance components into a single combined chrominance component before adjusting the luminance component;

weighting the combined chrominance component by a weighting factor based upon the high pass filtered luminance component; and

adjusting a luminance component of the color image based upon the weighted combined chrominance component.

23. A grayscale image created from a color image, wherein at least some pixels of the color image having the same color are mapped to different grays in the grayscale image depending on the spatial surround of each pixel.

24. A method for enhancing edges of objects in an image in a color to grayscale conversion, wherein the color image includes a plurality of pixels, comprising:

adjusting a luminance component of a subset of the plurality of pixels based upon the chrominance information of those same pixels;

wherein the subset of the plurality of pixels are proximate to an edge between one object and another;

and wherein pixels not proximate to the edge are not adjusted; and

generating an output image based upon the adjusted luminance component.

25. A method for improving a color to grayscale transformation of an image composed of a plurality of pixels, comprising:

selecting a subset of the plurality of pixels based upon at least one predetermined criterion derived from a local spatial neighborhood of the plurality of pixels;

adjusting the luminance components of each of the subset of the plurality of pixels based upon the chrominance information of the same plurality of pixels; and

generating an output image based upon the adjusted luminance component.

26. The method of claim 25, wherein the at least one predetermined criterion includes only selecting pixels in close proximity to an edge.

27. A method for improving a color to grayscale transformation of an image composed of a plurality of pixels, comprising:

determining which of the plurality of pixels are in close proximity to an edge;

adjusting the luminance components of each of the subset of the plurality of pixels based upon chrominance information from the same plurality of pixels; and

generating an output image based upon the adjusted luminance component.

28. A method for enhancing edges between a first object and a second object in a grayscale image created from a color image, comprising darkening the first object near an edge between the two objects and lightening the second object near the edge between the two objects as a function of the original color edge strength.